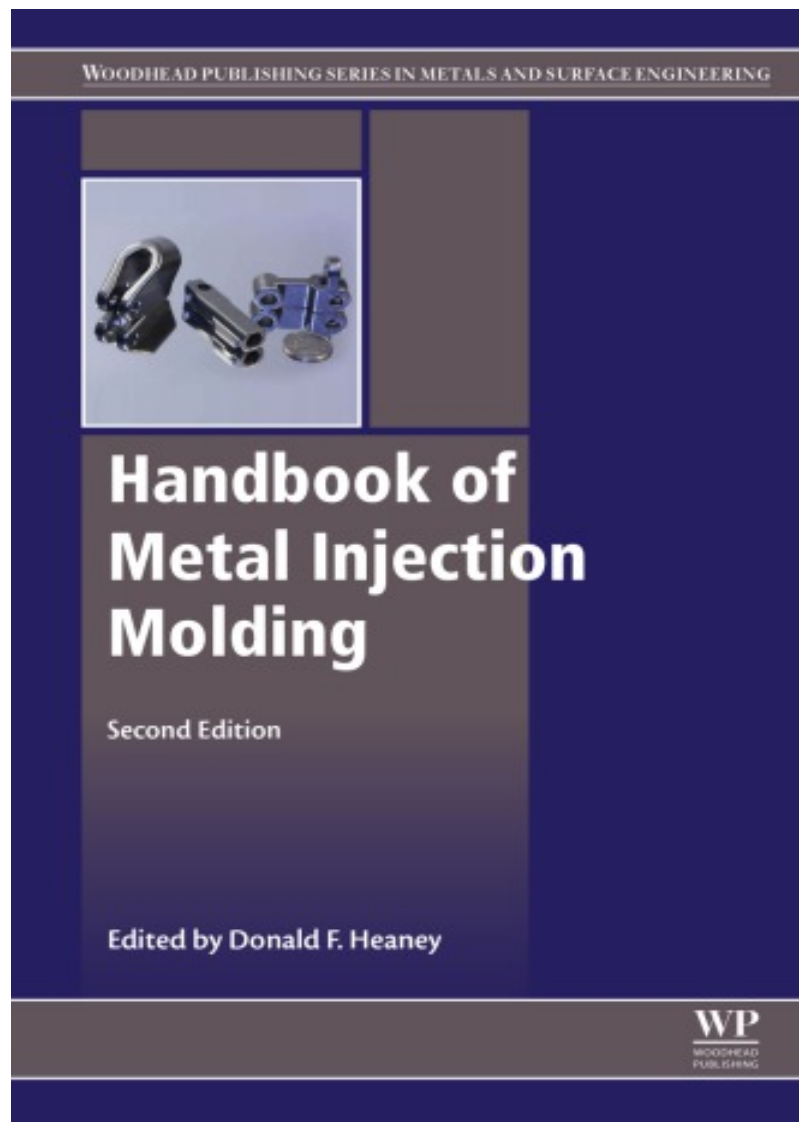


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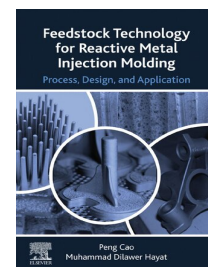


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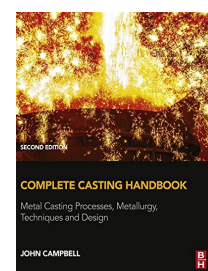
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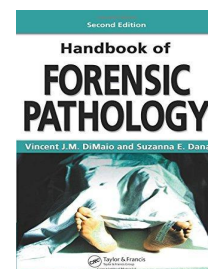
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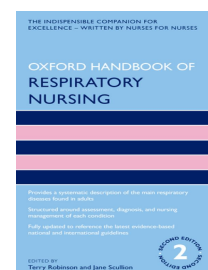
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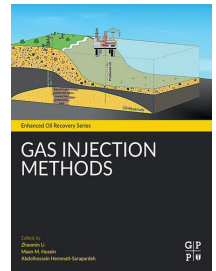
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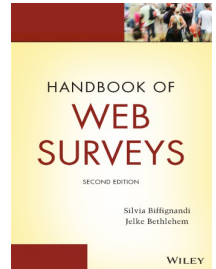
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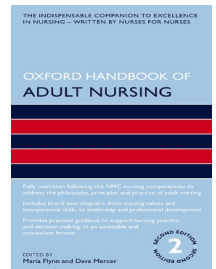
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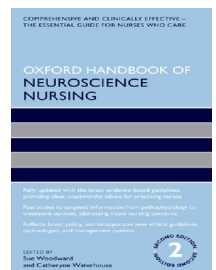
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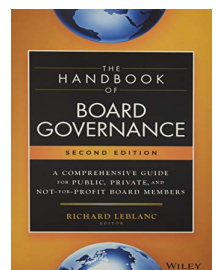
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Handbook of Metal Injection Molding

Second Edition

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Donald F. Heaney



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Metal powder injection molding (MIM): Key trends and markets

1

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1.1 Introduction and background

Powder injection molding (PIM) has a main subdivision, metal powder injection molding (MIM), that has penetrated many fields. This chapter captures the status of the MIM field and provides a basis for evaluating different operations, markets, and regions. Like powder metallurgy, MIM relies on shaping metal particles and subsequently sintering those particles. The final product is nearly full density, unlike press-sinter powder metallurgy. Hence, MIM products are competitive with most other metal component fabrication routes, and especially are successful in delivering higher strength compared with die casting, improved tolerances compared with investment or sand casting, and more shape complexity compared with most other forming routes. Injection molding enables shape complexity, high-production quantities, excellent performance, and often is lower in cost with respect to the competition. Its origin traces to first demonstrations in the 1930s. In the metallic variant, most of the growth has been after 1990, when profitable operations began to emerge following several years of incubation.

Sintered materials technologies (cemented carbides, refractory ceramics, powder metallurgy, white wares, sintered abrasives, refractory metals, and electronic ceramics) add up to a very large value, with final products reaching \$100 billion per year on a global basis. About 25% of that global activity is in North America. The production of metal powders alone in North America is annually valued at \$4 billion (including paint pigments, metallic inks, welding electrodes, and other uses, besides sintered bodies). Sintered carbide and metal parts production in North America is valued at near \$8 billion, where metal-bonded diamond cutting tools, sintered magnets, and semimetal products contribute significantly to industry heavily focused on automotive and consumer products.

The powder metallurgy industry consists of about 4700 production sites around the world involved in variants of powder or component production. Most popular is the press-sinter variant that relies on hard tooling, uniaxial compaction, and high-temperature sintering. Based on tonnage, about 70% of the press-sinter products are for the automotive industry. However, on a value basis, the story is dramatically different; metal cutting and refractory metal industries generate the largest value. Here, the products include tantalum capacitors, tungsten light bulb filaments, tungsten carbide metal cutting inserts, diamond-coated oil and gas well drilling tips,

high-performance tool steels, and molybdenum diode heat sinks. Compared to the other powder technologies, the MIM variant is still relatively new and small, but it is growing at 14% per year. In 2011, MIM products were globally valued at approximately \$1 billion. This sales activity is spread over about 300 actors. Thus, the average sales would be just \$3 million per year for a MIM firm.

1.2 History of success

PIM followed behind the first developments in plastic injection molding. Early polymers were thermosetting compounds; Bakelite, the first man-made polymer, was invented about 1909. Subsequently, as thermoplastic such as polyethylene and polypropylene emerged, forming machines appeared to facilitate the shaping of these polymers a few years later. The first demonstrations of PIM were nearly coincidental with the emergence of plastic injection molding. Simultaneously in the USA and Germany during the 1930s, this was applied to the production of ceramic spark plug bodies. This was followed by the use of PIM for forming tableware in the early 1960s. Generally, these were components with wide allowed dimensional variation. The MIM variant reached production in the 1970s. The time delay between early demonstration and commercialization was due to a lack of sophistication in the process equipment. The manufacturing infrastructure improved dramatically with the advent of microprocessor-controlled processing equipment, such as molders and sintering furnaces, which enabled repeatable and defect-free cycles with tighter tolerances.

About 80% of the PIM production capacity is devoted to metals, recognized as MIM, but this generally does not include other metal molding technologies such as die casting, thixomolding, and rheocasting. The first MIM patent was by Ron Rivers (Rivers), using a cellulose-water-glycerin binder that proved unsuccessful. Subsequent efforts with thermoplastic, wax-based binders did reach production at several sites.

Major attention was attracted when MIM won two design awards in 1979. One award was for a screw seal used on a Boeing jetliner. The second award was for a niobium alloy thrust-chamber and injector for a liquid-propellant rocket engine developed under an Air Force contract for Rocketdyne. Several patents emerged, and one of the most useful was issued in 1980 to Ray Wiech. From this beginning, a host of other patents, applications, and firms arose, with special activity in California. By the middle 1980s, the technology landscape showed multiple actors. Many companies set up at this time without a license, simply by hiring former employees from the early firms who brought with them insight into the technology.

All of the early binder patents have expired and the wax-polymer system discovered by Ray Wiech remains the mainstay of the industry. Since the mid-1990s, the use of paraffin wax has migrated to variants such as polyethylene glycol to give water solubility to part of the binder system. This has improved the concerns over solvents used to remove the binder from the molded component—simply immerse the shaped component in hot water to dissolve out most of the binder.

Thus, the MIM concept relies on plastic molding technology to shape a powder-polymer feedstock into the desired shape. The shape is oversized to accommodate shrinkage during sintering. After molding, the polymer is removed and the particles densified by high-temperature sintering. The product is a shrunken version of the molded shape, with near full density, and performance attributes that rival handbook values, usually far superior to that encountered in traditional press-sinter powder metallurgy and investment casting. This success is widely employed in small, complex, and high-value components, ranging from automotive fuel injectors to watch cases.

1.3 Industry structure

The MIM industry structure and interactions shows generally that the firms fall into a few key focal points. Everything revolves around the custom fabricators, firms that form components to satisfy the specifications of the user community—the users are generally well-known firms such as in firearms (Glock, Colt, Remington), computers (Hewlett Packard, Dell, Apple, Seagate), cellular telephones (Motorola, Samsung, Apple), hand tools (Sears, Leatherman, Snap-on Tools), industrial components (Swagelok, Pall, LG), and automotive (Mercedes-Benz, Borg-Warner, Honda, BMW, Toyota, Chrysler). The leading conference focused on MIM started in 1990 and continues today, where participants gather to share information on technology advances. At these conferences the actors in the industry generally come from one of the following sectors:

- *ingredient suppliers*—polymers, powders, and ingredients for either selfmixing or commercial feedstock production; globally there are approximately 40 firms that provide most of the MIM powders, although about 400 firms supply metal powders of various chemistries, particle sizes, particle shapes, and purities; for example, in titanium about four companies out of 40 suppliers make the powders used for MIM;
- *feedstock production firms*—purchase raw ingredients and formulate mixtures for sales to molding firms; globally there are usually about 12 feedstock suppliers;
- *molding firms*—both custom and captive molders that total nearly 300 MIM operations; about one-third are captive and make parts for themselves, but many of the captive firms also perform custom fabrication; 83% of all parts production is categorized as custom manufacturing;
- *thermal processing firms*—own sintering furnaces and debinding equipment that provide toll services; currently only a half-dozen firms are active in this area and most are associated with furnaces fabricators; a few firms provide toll hot isostatic pressing to force 100% density when required in medical or aerospace fields;
- *designers*—largely systems design firms associated with large multinational firms that intersect with the MIM industry; a few independent designers are available to handle ad hoc projects;
- *equipment suppliers*—firms that design and fabricate custom furnaces, molders, mixers, debinding systems, robotic systems, and other capital devices such as testing devices; the majority of molding machine sales are from six firms, furnace sales are from eight firms, mixer sales are from four firms, so about 20 firms constitute the key equipment suppliers;

- *consumables suppliers*—supply process atmospheres, chemicals, molds, polishing compounds, machining inserts, packaging materials, heating elements, and sintering substrates;
- *adjuncts*—including researchers, instructors, consultants, design advisors, conference organizers, trade association personnel, magazine editors, and patent attorneys.

Component production is the central activity. It is split between internal and external products, referred to as captive and custom molders. Likewise it is supported by two parallel supply routes, depending on the decision to selfmix or to purchase premixed feedstock. An example captive molder would be a firearm company that uses MIM to fabricate some of the safety, trigger, or sight components. On the other hand, custom molders also can make these same components, but just as likely may be involved in several application areas as determined by their customer base.

As outsourcing increases for multinational firms, custom fabrication grows. Accordingly, MIM from facilities owned by large firms such as Rocketdyne, IBM, AMP, and GTE as early adopters, shifted to purchasing components from captive molders focused on a variety of application areas. Some of the early captive applications included the following examples:

- dental orthodontic brackets made out of stainless steel or cobalt-chromium alloys;
- business machine components for postage meters and typewriters;
- watch components including weights, bezels, cases, bands, and clasps;
- camera components that included switches and buttons;
- firearm steel parts such as trigger guards, sights, gun bodies, and safeties;
- carbide and tool steel cutting tools such as wood router bits, end mills, and metal cutting inserts;
- electronic packages for electronic systems using glass-metal sealing alloys;
- personal care items such as hair trimmers using tool steel;
- medical hand tools for special surgical operations;
- rocket engines using specialty materials such as niobium;
- automotive air bag actuator components using hardenable stainless steels;
- special ammunition that included birdshot, armor piercing and frangible bullets;
- turbocharger rotors for trucks and automobiles formed from high-temperature stainless steels or nickel superalloys.

Since each of these MIM operations had a single field of focus, little was done to grow that portion of the industry. However, in more recent years growth in MIM has come with the shift to custom molding which services a wide variety of applications. The custom molding firms have joined together in efforts to advance the industry, via collaborative marketing efforts, promotion of material standards, publicity through annual awards, and sharing of business data. Although declining, captive molding still remains an important part of the MIM industry. Although the sales growth varies year to year, in most recent times, the global sales gain has been sustained at 14% per year.

1.4 Statistical highlights

Measures of the MIM growth are possible through several parameters, including the following.

- *Patents:* Since the start of MIM the total patent generation is large, exceeding 300 by the year 2000, but in more recent years the rate of patent generation has slowed and there are today about 200 currently active patents.
- *Powder sales:* In 2010, more than 8000 tons of metal powder were consumed globally by MIM, with a growth rate in powder tonnage use approaching about 20% per year, but due to price reduction the value increases about 14% per year.
- *Feedstock purchase:* The two options of self-mixing or purchasing feedstock seem to be of equal merit. Of the top firms, 71% form their own feedstock, which is almost the same ratio for all companies independent of size, suggesting purchased feedstock is neither an advantage nor disadvantage; however, self-mixing does provide greater manufacturing flexibility.
- *Mixing:* For those firms mixing their own feedstock, in 2011, they generate \$1.8 million in sales per mixer, but the top 20 firms that mix their own feedstock are at \$7 million in sales per mixer per year.
- *Sales per mold:* In many countries, especially when an operation is at a high utilization, the molding machine generates at least \$1 million in sales per year. Across the industry the mean sales per mold is \$536,000, while the leading firms have \$1.5 million in sales per mold per year.
- *Sales per furnace:* Furnaces come in many different sizes and designs, but across the industry sales average about \$1 million per furnace per year; for the top MIM operations (with larger and continuous furnaces) the sales average \$3.2 million per furnace per year.
- *Continuous furnaces:* In 2011, the installed capacity of high-volume continuous sintering furnaces reached 4500 tons of products per year; these are installed with a breakdown of 38% Asia, 47% Europe, and 15% North America.
- *Captive versus custom production:* About a third of the firms are captive, but only 21% of the firms have more than 50% of their sales internally. The best estimate is that 17% of the production value in 2011 is for internal use.
- *Sales per kg:* Across the MIM industry the average is about \$125 in sales per kg of powder consumed, ranging from highs of \$10,000 per kg for jewelry, cutting tips, and precision wire bonding tools to \$16 per kg for casting refractories. The largest ceramic application is in aerospace casting cores, and the typical is \$1000 per kg. Likewise, for metals, the stainless steel orthodontic bracket contributes nearly \$100 million in annual sales at an average near \$650 per kg. The low tolerance tungsten cell phone eccentric weights sell for a very low price, in the \$60 per kg range.
- *Sales per part:* Across the industry, the typical part sale price is between \$1 and \$2 each, but values range from 5 cent cell phone vibrator weights to \$35 solenoid bodies and \$400 knee implants.
- *Component size:* The most typical MIM part mass is in the 6–10 g range. The mass range is from below 0.02 g to over 300 g, but the mean is under 10 g. The largest MIM parts are heat dissipaters for the control systems in hybrid electric vehicles at 1.3 kg and some aerospace superalloy bodies that have similar mass and dimensions reach 200 mm. A growing aspect of MIM is the microminiature components where features are in the micrometer range and this approached \$68 million per year in sales for 2010.
- *Employment:* Nearly 8000 people are employed in PIM globally, of which nearly 7000 people are employed in MIM, giving an average of 21 people per operation and a median of just 16 people per MIM facility. The larger firms reach upwards to 300–800 people; the largest ceramic injection molding firm once reached employment near 800 people.

Historically, about 80% of the PIM field is for metallic components, or MIM. In recent times, that has increased to nearly 90% metallic. Of the 366 firms that currently

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Exploring the Variety of Random Documents with Different Content

"Howdy, Happy!" he greeted her. "How's you an' de little boy to-day?"

"Us is feelin' fine," Happy smiled. "How come you is runnin' aroun' when you oughter be keepin' bar?"

"I come to cornverse you 'bout a little bizzness," Skeeter answered promptly.

"Come up an' set down!" the young woman invited, pushing aside and making a place for him on the bench she occupied. "Rest yo' hat, put yo' foots on de porch rail, light a cigar, wind yo' watch—jes' make yo'se'f at home."

"Yes'm," Skeeter grinned, as he seated himself beside her. "Yo' name is shore a good sign of yo' disposition—bofe is happy. But, Happy, ef yo' name gimme de lock-jaw eve'y time I pernounced it, it would still taste awful good to me!"

"You muss hab kissed de coal-oil can befo' you lef' de Hen-Scratch, Skeeter," Happy responded. "Yo' nigger tongue is mighty slick!"

Skeeter ignored the remark and looked the woman over with appraising eyes. She was tall, slim, graceful, dark-skinned, bright-eyed, with an easy-smiling, good-natured mouth. Her home was in Baton Rouge, her dress and manner bespoke the city, and Skeeter's susceptible heart was deeply affected.

"Dat's a beautiful chile," Skeeter remarked fondly, as he gazed at the little boy who sat on the floor trying to see how close he could poke his finger toward the business end of a wasp without getting stung.

"Yes, suh, I's shore proud of my baby," the woman smiled.

"Would you loant him to me fer a little while to-night, Happy?" Skeeter asked.

"Whut you wanten do wid him?"

"He's such a diff'unt-lookin' kid to all dese here dirty pickaninnies in dis town dat I flggered it would be a good edgercation fer dese here home niggers to see him," Skeeter recited glibly. "Me an' Sheriff Flournoy follers up de Nigger Uplift Movement, an' I don't know nothin' dat'll put good notions in a nigger's head like gittin' a look at dis nice, dean, dressy nigger boy."

"Ain't it de trufe!" Happy exclaimed proudly.

"Yes'm," Skeeter continued. "I figger dat I could take yo' little boy to de Hen-Scratch to-night, show him off, brag on him, an' make dese home niggers ashamed of deir offsprings—ain't dat so?"

"Shore is!" Happy replied. "I wisht I could be dar an' hear you brag yo' brags on him."

"'Tain't possible," Skeeter exclaimed quickly. "Womans ain't be allowed in de Scratch. But ef yo' little boy makes a hit, I might could git de Revun Vinegar Atts to gib a baby show at de Shoofly chu'ch, an' I'm shore yo' little boy would tote off de prize."

"You kin hab him, Skeeter!" the woman exclaimed exultantly. "You come fer him to-night atter supper. I'll hab him all dressed up like a circus bandwagon. Only I gibs you dis advice right now: don't grab my chile by de lef' arm onless you wants him to sot up a howl. Dat arm is powerful sore!"

"I'll lead him by de han' like a gen'leman," Skeeter grinned. "Whut is de name he's called by?"

"I calls him Ready Rocket—atter his deceasted paw," Happy told him.

"I'll come by fer him atter dark, Mrs. Rocket," Skeeter declared, as he reached for his hat. "Git him ready."

As Skeeter walked down the street a new idea came to him.

"Dat woman is gwine dress up dat kid like a Mardi Gras, an' Shin won't swipe him—Shin'll know dat ain't his'n. I wonder is Whiffle lef' town yit?"

Skeeter hastened to Pap Curtain's cabin and found that Whiffle had not.

"Whiffle," he said, "I come mighty nigh fergittin' a mos' important bizzness. I want some of little Shinny's ole ragged clothes. Ef Shin comes to steal dat yuther brat to-night, we got to fix him up so Shin won't find out de cub ain't his'n."

"I got plenty ragged clothes," Whiffle replied. "I'll git you a full suit."

"When is you leavin' out fer de hog-camp, Whiffle?" Skeeter asked as soon as the suit was wrapped in a bundle.

"I's gittin' ready to walk right now," Whiffle told him.

"Dat's a good idear to walk it," Skeeter remarked. "You kin take shawt cut-offs through de woods, an' ef anybody is passin' you kin hide in de grass so dey cain't see you is got little Shinny wid you."

"It's a powerful long walk," Whiffle complained. "But I guess I'm got to take it."

"You kin come back in de mawnin'," Skeeter assured her, as he rose to go. "When Shin finds out he's made a miscue an' stole de wrong chile, de Tickfall niggers will buzz him till he leaves town fer good."

It was sundown when Skeeter got back to the saloon, and he ate his supper and waited impatiently until the darkness was heavy enough for him to venture after Happy's son. At last he slipped to her cabin, lifted the laughing little fellow upon his shoulders, and carried him back to the rear room of his saloon.

"Huh," Skeeter grunted as he turned on the light and surveyed the boy. "Happy shore has put de paradise rags on Ready Rocket. He looks like a valumtime. I don't b'lieve he'll feel half as comf'able in dem gyarmints as he will in dese sensible clothes."

Then for the first time in his life Skeeter began to undress a baby. His inexperienced hands were as clumsy as if he wore boxing-gloves; he felt around the garments for buttons and stuck pins in himself; he unhitched parts of the little fellow's harness and found to his surprise that they were connected with other parts of his clothes which apparently had no way of being detached. The sweat popped out on Skeeter's face, his fingers trembled, and his lips were drawn in a straight, nervous line.

"Gosh!" he sighed. "Dis is de hardest wuck I ever done, an' I ain't done it yit. Dis job ain't even good started. It would take about fo'teen womans to undress dis valumtime doll. I bet his maw melted him in a cookin' pot an' poured him into dese clothes."

He struggled on, jerking and pulling, but accomplishing little. Then he straightened up and surveyed his task.

"Ef I could button dem clothes on de way dey wus at fust, I'd put little Shinny's rags on over 'em," he announced to himself. Then he shook his head hopelessly. "'Tain't no use tryin' dat. I gotter study dis problem out an' git dem bliss rags off!" He turned the boy around to take a comprehensive survey of the mystery. Then he found a button in the rear and undid it. The clothes fell off of little Ready Rocket like the last leaf off of a tree, leaving the limbs bare.

"Dar now!" Skeeter snickered. "Ain't dat funny! Dis here is a one-button suit. You press de button an' lo an' beholes!"

He looked the tiny black-skinned chunk of humanity over. On Ready's left arm he found an ugly scar.

"Looks like a fresh vaccinate mark to me," he muttered. "I mighty nigh fergot whut Happy tole me 'bout dat sore arm."

He brought a bright red stick of candy out of his pocket and placed it in Ready Rocket's willing hand.

"Now, sonny," he whispered. "You suck dat sugar-stick an' fergit dat I is changin' yo' clothes. I cain't handle dese city duds, but I knows how to put on little Shinny's overalls an' shirt beca'se I wore dem kind of drapery my own se'f."

The little fellow murmured no complaint at the operation except when Skeeter momentarily separated his hand from his mouth and deprived him of his sugar-stick. But Skeeter quickly made the proper connection again, and when the child was dressed in little Shinny's old clothes, Skeeter tossed the glad rags into a dark corner, lifted Ready in his arms, and carried him out on the street.

"Now, sonny," he said, as he placed Ready on the ground, "us 'll take a long, long walk!"

He started straight down the middle of the sandy road, the little boy trotting beside him sucking his candy. A quarter of a mile had been covered in this way when Ready Rocket dropped his candy.

"Ah-hah!" Skeeter said, as he picked up the sticky candy, wiped a little of the sand and dust off it, and stuck it back in Ready's gaping mouth. "Dat's a good sign—you is gittin' tired an' sleepy."

They turned around and started back toward the saloon, Skeeter pressing the boy to walk as fast as he could. Half a dozen times in the return walk the little fellow dropped his candy and finally Skeeter grew tired of Ready's carelessness. He merely picked up the sticky substance and helped Ready make connection with his mouth and hand, without taking the trouble to wipe off the dirt.

"Ef you git de colic eatin' dat gorm of sugar an' dirt, I hopes Shin Bone will hab you to wait on," Skeeter remarked to his charge. "I ain't got no expe'unce wid some yuther nigger's stomick-ache."

Within two blocks of the barroom, Ready's little feet stopped like a clock with a broken spring. Skeeter dragged him for a few steps by the arm. Then he lifted the sleeping child, carried him to a ragged quilt in a corner of the rear room, and laid him down. The child's tiny hand still clutched the muddy sugar-stick.

Skeeter entered the saloon and took his place behind the bar to wait for Shin Bone. He did not have long to wait, and when Shin Bone appeared Skeeter gasped, and his hand slipped to the little shelf under the bar where his automatic pistol rested.

Shin had been drinking heavily, but the liquor had not made him noisy. He was extremely quiet. He walked restlessly about the barroom with the prowling movements of a cat, careful not to make a noise with his feet as he staggered across the floor, answering if spoken to in a whisper, and glancing nervously around him all the time. The practised eyes of the negroes recognized the signs of danger. They knew Shin was out to kill. Some slipped away, and all the others became perfectly quiet. They knew that a loud laugh, the noise of an overturned chair, the breaking of a glass, the clatter of a stick falling to the floor, any of these things might start the drink-crazed negro to shooting. Shin had not only never been drunk before, but no one had ever seen him drinking. But now no jungle beast was more dangerous.

Finally Shin walked straight up to Skeeter and leaned against the bar.

"Skeeter, is you got my little boy?" he inquired in a low tone with exaggerated courtesy.

"Dar's a little pickaninny sleepin' on a quilt in de back room, Shin," Skeeter answered uneasily.

"I wants him," Shin remarked.

"He ain't no kinnery of mine, Shin," the barkeeper retorted. "Ever who owns him kin hab him."

"Dis here sinful saloom ain't no fitten place fer my angel chile," Shin remarked in the same low, deadly tone.

"His maw axed me to keep him, Shin," Skeeter said. "Of co'se, a daddy is got de fust right to his own baby an' I's jes' tryin' to be friends on bofe sides."

"You ain't no friend of mine," Shin told him flatly. "I ain't huntin' no friends. I's huntin' revengeance!"

Shin walked away, muttering to himself.

Skeeter listened and heard Shin stumble across the floor in the rear room. With a loud grunt he stooped over the soiled quilt where Ready Rocket lay. With a louder grunt, he lifted the boy in his arms, and Skeeter heard him stagger to the door and close it quietly behind him.

A few minutes later Skeeter heard a loud wail down the street, and broke into a broad grin.

"I reckon Shin is done fell on Ready Rocket an' squashed him; mebbe he's done squeeze Ready's sore arm; mebbe Ready's got de colics—I hopes so. I hopes all dem things is come to pass."

About two hours after Shin Bone had taken his departure with little Ready Rocket, Mustard Prophet entered, looked around the barroom for a moment, then came over to Skeeter Butts, and inquired:

"Whar is Ready Rocket?"

"Gawd knows," Skeeter replied. "He has went."

"Happy Rocket sont me to fetch him home," Mustard said. "She say it's little Ready's bedtime an' he'll git sleepy."

"My stars an' garters!" Skeeter exclaimed. "She don't look fer dat brat home to-night, do she?"

"Suttinly. Whar is he at?"

Skeeter began to pant. He mopped the sweat from his forehead and looked around him desperately. His eyes lighted upon Pap Curtain.

"Come over dis way, Pap," he called.

When Pap and Mustard stood side by side, Skeeter leaned over the bar and said earnestly:

"Pap, I want you an' Mustard to keep bar fer me till I git back."

"Dat suits us!" the two darkies chanted.

"I'll tend to little Ready Rocket, Mustard," Skeeter said as he reached for his derby hat.

As he passed out the two negroes looked at each other and grinned.

"Skeeter's done kotch de mattermony germ agin," Pap chuckled. "Tryin' to hitch up wid Happy Rocket an' her whelp. Lawd! Think of Skeeter marryin' a widder an' a ready-made fambly!"

Skeeter made a bee-line for Mustard Prophet's cabin where Mrs. Happy Rocket could be found. But he had no matrimonial intentions.

"I jes' drapped over to tell you 'bout little Ready Rocket, Happy," Skeeter began as soon as he was seated. "Ready won't be home to-night."

"Won't—*which?*" Happy's voice was almost a scream.

"Ready's gwine lay out to-night," Skeeter remarked easily, lighting a cigarette.

"How come?" Happy wailed, and her voice had a note of hysteria.

"It happened dis way," Skeeter replied. "Ready got a little sleepy an' I spread him down a pallet on de flo' in de rear room. A drunk bum named Shin Bone foun' little Ready an' thought it wus his own chile, so he picked him up an' toted him off!"

Skeeter didn't see any actuating cause for what followed this statement and the astounding result gave him the supreme sensation of his life.

Mrs. Happy Rocket sprang to her feet, spun round and round like a whirling dervish, tore at her hair, then wrapped her long arms around her head and screamed like a maniac!

"My Lawd!" Skeeter exclaimed. "Stop dat yelpin'—you's fetchin' dat bawl too high! A police will come an' git you toreckly!"

"O my chile! my chile! my baby chile!" Happy screamed, wringing her hands, walking up and down the porch floor, and stopping her walk now and then to spin around like a top. "Lawd hab mussy! My onliest baby chile!"

"Aw, hush!" Skeeter pleaded, absolutely blind to the distress of the woman. "You done mourned a plenty 'bout dat little weanlin'. He ain't nothin' but a two-year-ole!"

"Stole by a drunk man!" Happy whooped. "Toted away! O my po' little baby boy—he'll be kilt!"

"Naw!" Skeeter protested. "Shin won't do nothin' like dat. Shin thinks dat is his boy. He'll fotch little Ready back as quick as he gits sober."

"Oh! Oh! Oh!" Happy screamed, as she turned from Skeeter and staggered into the house. "Oh!"

The agony in the mother's voice caused Skeeter's hair to stand on end. Inside the room Happy fell flat upon the floor unconscious.

"Gawd he'p us!" Skeeter screamed. "She's done throwed a fit!"

He called loudly for Hopey, Mustard Prophet's wife, then instantly remembered that she had not yet come from the Gaitskill home where she was cook. He started out of the door in a run to seek for help and met Hopey at the gate. She had heard the screams and had come in a panic.

Hopey was fat and spread out like a dumpling soaked in gravy, and was sweating like an ice pitcher from her excitement and exertion.

"Whut's de matter, Skeeter Butts?" she howled. "All dis flurry gibs me a toothache in my stomick."

"Happy ain't happy no more," Skeeter lamented. "She's hacked!"

"Whut made her dis way?" Hopey panted, as she bent over the young mother's prostrate form.

"She got peeved up beca'se I borrered little Ready Rocket an' couldn't fotch him back," Skeeter explained.

"Go git him!" Hopey whooped. "Hurry befo' dis nigger woman dies!"

"Huh," Skeeter grunted. "You ack like a little nigger cub is wuth a millyum dollars!"

"Go git him!" Hopey howled.

"I don't know whar he am!" Skeeter retorted. "Shin Bone swiped him!"

"You nachel-bawn, ignernunt *fool!*" Hopey screamed. "Shin ain't run off nowheres! I passed de restaurant jes' now an' he wus settin' in dar by hisse'f singin' religium toons! Go git Ready!"

Skeeter shot out of the door and ran across the yard, but before he reached the street, Hopey bawled after him:

"When dis nigger woman comes outen her fit, I's gwine tell her all about dat plan you fixed up to make Shin steal her darlin' chile—an' she'll pull yo' hind leg off an' beat yo' brains out wid it!"

At the nearest corner Skeeter came to a quick stop.

"Ef Shin Bone is settin' in his eatin' house drunk an' singin' religium toons, it's a shore sign he'd shoot me in a minute ef I tried to git dat Ready Rocket."

He snatched off his hat, clawed at his thinly cropped hair, and sighed like the exhaust of a steamboat.

"Ain't I in a awful mess?" he panted. "I done twisted an' turned myse'f till I's too crooked to walk through a tunnel—when I die dey'll hab to bury me in a round hat box!"

He dropped down upon an old stump, and his nervous feet beat a tattoo upon the sandy soil.

"I never knowed womans wus so crazy about deir chillun befo'," he exclaimed. "My mammy done los' me out in de woods an' Marse John Flournoy foun' me in de swamp when I wus 'bout two year ole. He tole me I wus plum' naked, jes' crawlin' aroun' in de high marsh grass like a little lan' tarrapin. Dat don't look like nigger mammies loved deir brats. But den, dey done foun' my mammy daid in anodder part of de swamp. But dese here modern niggers—lawd, dey shore cherish spite!"

Suddenly a new thought galvanized him into action.

"Dat's de idear!" he proclaimed, springing to the middle of the street and running at full speed. "I'll ride out to de hog-camp in de Little Moccasin Swamp an' make Whiffle Bone let me fotch back little Shinny to his real paw. Den I'll get Shin Bone to swap brats wid me, an' dat'll make us even an' end all dese troubles."

He ran through the crooked lanes of Dirty-Six like a brown shadow, passed with unchecked speed through the portion of Tickfall occupied by the whites, and began to pant up the long hill on the summit of which stood the house of Sheriff John Flournoy.

Skeeter was perfectly at home here, for he lived in a cabin in the rear of Flournoy's house, and had done just as he pleased about the place ever since Flournoy had found him in the swamp, a little naked baby crawling through the high marsh grass, mewling like a little blind kitten. He hurried around the house to the garage and opened the doors as noiselessly as he could. He had determined to use a little runabout which Flournoy kept for his fishing and hunting trips. In this machine he could go to the hog-camp, get Whiffle Bone's baby, and return in a very short time.

He pushed the little runabout out of the garage, pushed it down the hill in the rear of the house, cranked it, sprang into the seat, and drove through a back pasture, out of a gate, and onto the rear street. He took one fearful look behind him and saw with gratification that no light had flashed up in Flournoy's house to show that the occupants had been disturbed by his intrusion upon the property.

Skeeter shot through the white portion of the town, and turned into the lanes of Dirty-Six at a perilous speed. His dilapidated machine was rattling and squeaking a loud protest at every turn, but Skeeter did not heed the warning.

Then as Skeeter passed Pap Curtain's house, a tire burst with a loud explosion, the runabout careened perilously, and before Skeeter

could stop, it leaped from the road, crashed through Pap Curtain's fence, and came to a halt within a few steps of Pap's porch.

In the silence which followed, Skeeter heard a woman in Pap's cabin whooping like a siren in a fog.

"Aw, shut up!" Skeeter snapped. "You ain't in no danger. *I's de coon whut oughter be howlin'.*"

He leaped out of the machine, snatched open the tool box, wrenched off an extra tire from the rear of the car and began to make repairs.

The door opened and Whiffle Bone stepped out upon the porch!

"Bless gracious, Whiffle!" Skeeter exclaimed in a glad voice, as he worked with furious haste adjusting his new tire. "I thought you wus out at de hog-camp. Whar is little Shinny Bone?"

This question started another series of howls, and Skeeter had his tire fitted and was ready to crank his car before Whiffle had calmed down to where she could answer.

"Little Shinny has went!" Whiffle screamed. "I decided not to go to de hog-camp beca'se it wus so fur. I tried to keep little Shinny hid in dis cabin. But Hopey Prophet an' a nigger woman named Happy comed here jes' now, an' Happy blacked my eye an' punched my face an' hurt my feelin's at some yuther places an' took little Shinny Bone away. Dey said dey wus gwine keep him fer security till you fotch back Ready Rocket! I woulder follered 'em, but I wus skeart dey would kill me!"

"Dat's good news, Whiffle!" Skeeter exclaimed as he cranked his car, and sprang into the seat. "Keep ca'm, an' plug up de calliope! I'll go git Ready Rocket an' fetch little Shinny back in less'n a minute!"

"I'll git little Shinny fust," Skeeter decided as he shot down the street. He stopped his automobile a block away from Mustard Prophet's house, ran down the street, and slipped into a little side yard by climbing the fence.

Hopey and Happy were in the kitchen, and Skeeter heard Hopey's loud voice:

"'Tain't no good fer you to howl, Happy. Skeeter will fotch back yo' little boy as quick as he kin git him, an' we done got dat yuther woman's brat fer s'curity."

"'Tain't nothin' like habin' yo' own chile!" Happy wailed.

"Hey!" Hopey bellowed. "Sup up dis hot tea now an' stop blubberin'!"

Skeeter had heard enough to know that the women did not have the child in the kitchen with them. He stepped around the house, tiptoed up to the porch, and lo! the boy lay asleep upon the bed just inside of the open door.

"Dat gits me straight in dis bizzness," Skeeter grinned, as he slipped into the room and lifted the sleeping child. "I'm shorely got de Lawd wid me dis time. Nobody cain't git dis pickaninny away from me widout plenty compement!"

He deposited Shinny in the machine, spun down the street to the Bone eating-house, and once more stopped his car a block away.

"Shin's got killin' on de brain," he muttered. "I's gwine spy aroun' a little befo' I crowds him too close."

Shin Bone was seated alone in the middle of his restaurant which was lighted up like a circus. He was lining out a church hymn, singing it at the top of his voice, and beating the time with a large tin coffee pot. He had pounded the table with his tin pot until it was a certainty that it would never serve its original purpose again.

"I guess little Ready is sleepin' in de back room," Skeeter remarked, as he slipped around to the rear.

He entered the open door and found the child lying upon the bed which was usually occupied by Shin Bone's real son. Carefully lifting the little fellow, Skeeter walked quickly down the street, grinning exultantly as he listened to Shin Bone's raucous voice singing:

"O heaben's mighty nigh,
Mighty nigh, mighty nigh,
Ef you got a eye fer visions
In de sky, in de sky!"

When young Ready lay beside Shin Bone's boy in the automobile, Skeeter felt almost happy.

"It 'pears to me like I got dis job by de tail wid a downhill pull!" he exulted, as he started his machine and drove away from Dirty-Six with a lighter heart.

"I'se gwine take dese babies to my cabin," he decided. "Dem squallin' womans kin wait fer deir brats—dey don't 'preciate whut I done fer 'em nohow. But Marse John might git peeved up ef he missed dis automobile an' I cain't affode to git in no lawsuit wid de cotehouse."

Entering Sheriff John Flournoy's yard, Skeeter Butts drove his little rattling runabout up the asphalt runway toward the garage in as nearly perfect silence as he could command.

Quickly he dismounted and pushed the little machine back where it belonged. Then he lifted the sleeping children out of the machine and started toward his own cabin.

Instantly a long shaft of white light shot across his path and he scampered out of the way, hiding behind some shrubbery which grew close to the house. He looked down the runway and his hair stood on end.

Flournoy's big automobile was coming up the drive, its powerful light turning from side to side, illuminating every inch of the way. Skeeter did not know what moment a turn of the wheel would cause the light to flash across his body, so he slipped along the side of the house out to the front.

Alas! Standing at the front gate where she had just left the car was Mrs. Flournoy, and the electric light upon the corner made the front lawn as bright as day.

Skeeter noted that Mrs. Flournoy's back was turned to him, so he scampered up the front steps and entered the front door just as Mrs. Flournoy turned to come up the walk.

Flournoy never thought of locking his house for the reason that half a dozen bloodhounds were running at large on his lawn all the time. For a moment, because of this fact, Skeeter had escaped observation. What to do next was his problem.

The house was perfectly familiar to Skeeter. He could have gone all over it with his eyes shut. And he was perfectly welcome there night and day, for he had been coming and going in that house for twenty-five years with no one to question his actions. But he had no desire to be caught in that house with two strange babies in his arms!

The front door opened and Mrs. Flournoy entered, snapping on the electric light in the reception-room. Skeeter retreated to the dining-rooms still hugging the two children in his wearying arms.

"Huh," he muttered to himself. "Dese folks always gits somepin to eat befo' dey goes to bed. I better git outen dis dinin'-room!"

He was just in time, too, for the doors to the dining-room slid open just as Skeeter stepped into a little back hall, which contained a narrow staircase leading to the second story. Skeeter tiptoed up the steps. His idea was to wait until the folks had entered the dining-room, then go down the front stairs, out of the front door and around to his cabin.

But luck was against him!

At the top of the steps he paused to rest his arms and get another grip upon the children he was carrying. He laid the boys side by side, took one under each arm like a bundle, and started on. Then it happened. He attempted to enter a narrow door and a little woolly nigger head hit the sharp edge of the door jamb on each side with a thump!

The two pickaninnies let out a howl which turned Skeeter's blood to ice water.

Any effort toward concealment was useless now, and Skeeter was consumed with desire to get out of that house. He galloped down the front steps, turned into the rear hall, and stepped out upon a side porch.

Sheriff John Flournoy met him at the steps!

Flournoy turned the electric flashlight he had been using at the garage into Skeeter's face, and the blinded, terrified darky reeled backward and dropped the two howling nigger babies upon the porch floor.

"Turn on the light, Skeeter!" Flournoy commanded.

Skeeter reached up above his head and switched on an electric light suspended from a cord.

Flournoy looked down at the howling nigger babies and grinned. He saw nothing unusual in the fact that Skeeter was coming out of his home at eleven o'clock at night, for Mrs. Flournoy had left Skeeter in charge of the house a thousand times in their absence. Nor did the two black babies excite anything more than amusement, for several negro families lived on his place and their cabins were full of children.

"Did you steal those nigger babies, Skeeter?" Flournoy drawled in his easy, smiling way. The remark was merely to make talk.

"Naw, suh," Skeeter stammered. "Naw, suh!"

"I'm glad to hear you say that," Flournoy chuckled. "Since the Lamana kidnaping case, the Legislature has passed a law making the penalty for stealing children very severe in Louisiana."

Skeeter attempted to moisten his parched lips with a dry tongue. Then he asked through jaws which felt like they were locked:

"Whut—whut—whut am de penalty, Marse John?"

"*Death!*" the sheriff answered.

Then an oath of surprise popped from his throat. Skeeter had crumpled like a broken weed and had fallen face downward between the two squalling black babies.

Flournoy leaped forward and turned the prostrate man over on his back.

The negro had fainted.

Mrs. Flournoy appeared upon the side porch and quieted the babies by the simple process of giving each of them a piece of fried

chicken.

Sheriff Flournoy as quickly restored Skeeter to consciousness by pouring cold water on his head and hot liquor down his throat.

Then leaving the babies to play under the electric light upon the porch, they conducted Skeeter to the kitchen and demanded explanations.

Nobody can beat a negro making explanations.

Skeeter's statement was utterly untrue, but when we remember that the frightened darky considered that he had been guilty of the crime of kidnaping and was hopefully attempting to save himself from the penalty of death, all kind-hearted persons will forgive him. Most of us would stretch the blanket just a little if by doing so we could save our lives.

"It happened dis way, Marse John," Skeeter said in a trembling voice. "I wus givin' dem two little black babies a little outin', an' I decided I would fotch 'em up here an' let 'em see whar I lived at. I's proud of dat little cabin whut you-all gib me, even ef I do say it myse'f. I ain't been feelin' so powerful well sence 'bout supper-time to-night—it muss had been somepin I et—an' passin' de house I got to feelin' powerful bad, an' I decided I would git me some medicine. I knowed you-all warn't at home, but de med'cine chist is right up-stairs whar it's been fer twenty year, so I wint up dar to git me some liniment to rub on my misery. When I heerd the auto come in, I comed down to ax Ole Miss whut to take, an' when I wus talkin' to you on de po'ch somepin jes' nachelly happened!"

This sounded perfectly plausible to Skeeter's two white friends who did not have the least hint of the mess he had mixed down in the negro settlement.

"You'd better go to bed, Skeeter," Flournoy said kindly. "I've seen niggers pull many different stunts in my life, but you are the only

darky I ever saw all in a dead faint."

"I been feelin' kinder faint an' feeble fer a good while," Skeeter moaned.

"I'll give you some pills to take, Skeeter," Mrs. Flournoy said. "Go to your cabin, and if you are not better in the morning we'll have the doctor."

Skeeter turned to her pleadingly.

"Whut is I gwine do wid dem two nigger babies?" he asked. "I bet deir maws is bellerin' fer 'em right now like cows callin' fer deir calves."

"Do you feel strong enough to drive my little runabout, Skeeter?" Flournoy asked. "You can take the babies home in that."

"Yes, suh," Skeeter exclaimed eagerly. "I's strong enough to run it an' de fresh air will do me good."

Flournoy pushed out the little machine, helped Skeeter arrange the children so they would not tumble out, cranked the car for the "sick" negro, and for the second time that night the sheriff's little runabout started for Dirty-Six.

In the meantime things had been happening in that negro settlement. The grapevine telephone carried the news that Shin Bone had stolen Happy Rocket's baby. A little later the message ran along the same mysterious channel that Happy Rocket had stolen Shin Bone's baby. Then the startling information came that some party or parties unknown had stolen Shin Bone's baby out of Happy Rocket's cabin.

This was enough to bring the entire population of Dirty-Six out of their cabins into the street. They streamed up and down the narrow lanes, jabbering, gesticulating, telling again and again of the fight

between Whiffle Bone and Happy Rocket, of the divorce of Shin and Whiffle, of the drunken spree of Shin Bone.

The general idea prevailed that Shin Bone had possession of both babies, but no one cared to go and inquire while Shin was crazy drunk, singing "heavy religion" songs, and pounding the table with a tin coffee pot.

Then Whiffle Bone caused a sensation by leaving her uncle Pap Curtain's cabin and running down the street toward the Bone eating-house squalling like a catamount. Dozens of negroes fell into her wake and followed at a safe distance.

As they approached the restaurant they all recognized with pleasure that Shin Bone was sobering up. The best indication of this improvement was the character of songs he was singing. He had abandoned the heavy religion tunes, his voice had lost some of its volume, and the music was gay and lightsome:

"De boss he squall to de nigger boys:
 'Don't bother dat jug in de spring!'
De jug he gurgle out: 'Good, good, good!'
 But me, I holler an' sing:
'O gimme dat gal,
De big, greasy gal—
Don't nobody bother dat sway-backed Sal,
 Who wrops up her hair wid a string!'"

Whiffle Bone threw open the door of the eating-house, ran across the sanded floor, threw herself into Shin Bone's outstretched arms, and broke into his song with a loud wail:

"O Shin, I loves you wid all my heart! Less don't fuss no more—I'll 'vide up de money even! An' fer Gawd's sake, come an' he'p me find little Shinny, our darlin', angel chile!"

"Don't pester yo' mind 'bout our angel chile," Shin Bone vociferated, pounding the table with the battered coffee pot. "I fotch him home from de Hen-Scratch—he layin' in de back room in his own little bed!"

Placing his coffee pot under his arm, he led his sobbing, hysterical wife into the back room and then stood gazing in pop-eyed, drunken amazement at the empty bed.

"Whar is he at? Oh, whar is he *at*?" Whiffle screamed.

"I—I thought I toted him home, Whiffle!" Shin Bone said in a hysterical tone. "I wonder did I drap him down a well—or somepin like dat?"

This suggestion threw Whiffle into a maniacal frenzy and administered such a shock to Shin Bone that it sobered him completely in a moment.

"Come on, squall-cat!" he bellowed. "Less go to de Hen-Scratch an' ax Skeeter Butts 'bout dis!"

When they arrived at the saloon they found a dense crowd of negroes within the place listening to the whoops and howls of Happy Rocket and Hopey Prophet, both of whom had also come to the saloon to interrogate Skeeter Butts.

When Shin and his wife entered they occupied the opposite end of the barroom, and then began an antiphonal chorus between the two bereaved parties which was better as a show to the bystanders than a zoo full of ring-tailed monkeys.

Finally all their wails became focalized into one hysterical appeal:

"Where, oh, where is Skeeter Butts gone at?"

When Skeeter spun around the corner and looked up the street at the crowd assembled around his place of business, he availed himself of benefits of that intolerable nuisance called the muffler cut-out, and drew up to his saloon and stopped his car, popping like a battle of rapid-fire guns.

A man-sized voice at the door bawled the information to the people in the saloon:

"Here comes Skeeter Butts in Sheriff John Flournoy's ought-to-be-a-mule!" A moment later he bawled another announcement: "Skeeter's got the two lost babies wid him!"

In a moment more Skeeter was pushing and shoving at the door, while his voice cackled like a hen:

"Git out de way an' lemme pass! Lemme git in wid dese here stole babies!"

They made a ring around him in the middle of the room as he placed the two grinning, bright-eyed children on the floor at his feet. Each baby was happily chewing a chicken bone. The two mothers rushed forward to embrace their children, but Skeeter's commanding voice cracked like a bull-whip:

"Stan' back, nigger womans! Don't tech dem brats till I gib de word!"

There was a moment of intense silence while Skeeter gathered his wits to speak. No one in that crowd will ever know how frightened the little barkeeper was, nor how desperate. He had determined to risk his life and liberty upon the magic name of John Flournoy, Sheriff of Tickfall parish.

If this name failed to save him, he saw nothing before him but the prison and the hangman's noose.

"I been talkin' to Sheriff John Flournoy," he began. "Me an' Marse John is kinnery—I'm his folks."

He paused and took out his handkerchief, mopping his face. He felt like every pore of his skin was a spouting fountain of perspiration and he was sweating ice water.

"I went up to Marse John's house an' tole him dat Shin Bone stole little Ready Rocket outen my saloon, an' Marse John mighty nigh bust out cryin'! I tole him dat Happy Rocket stole little Shinny Bone right outen his mammy's arms, an' Marse John jes' blubbered right out like a little baby!"

"I don't see nothin' so powerful bad!" Shin Bone interrupted.

"My Gawd, Shin!" Skeeter exclaimed with all the dramatic force of his nature. "Marse John says he ain't had to hang no nigger sence he's been a sheriff, but de law specifies dat *de penalty fer stealin' a baby is death!*"

If Skeeter hoped to make a sensation, he did!

Whiffle Bone threw her arms around her husband's neck and sobbed as if he were already dead.

Happy Rocket dropped upon her knees upon the barroom floor, raised her quivering hands in an attitude of prayer and sobbed:

"O mussiful Gawd! I's a mean, wuthless nigger an' I ain't prepared to die!"

"Looky here, Skeeter!" Shin Bone howled in a desperate, frightened voice. "Didn't you steal dem babies yo' own se'f? How come you is got 'em wid you ef you didn't steal 'em?"

"Naw, suh!" Skeeter Butts squealed. "I attached dem chillun in de name of de law an' de sheriff an' de Nunitied States of Loozanny!"

Then Shin Bone broke down and howled:

"Gimme my baby! Me an' Whiffle is gwine leave dis town till atter de gram-jury meets!"

"Take him!" Skeeter exclaimed. "I don't want him—I'd druther hab a yellor-jacket under my shirt. Jes' take yo' brat an' go!"

"Gimme my baby!" Happy screamed. "I'se gwine back home to-night on de fust train!"

"Honey, don't let nothin' detain you!" Skeeter admonished her. "I don't want yo' baby—I'd druther hab a cockle-bur in my sock. Jes' take yo' brat an' go!"

In a few minutes the barroom was empty, the crowd splitting into two parts, following either Happy Rocket or Shin Bone home, according to their sympathies.

In the middle of the floor Skeeter found a tin coffee pot. It was battered, broken, and useless, and one side was caved in until it resembled a big, toothless mouth grinning at him in sardonic glee. He bent over it, examined it from all sides, but did not touch it. The mishaps of the night had made him cowardly.

"Nigger luck is always bad luck," he whispered. "Dis here tin pot might be a bomb an' bust right in my face. I'll let Little Bit pick it up when be cleans up in de mawnin'. All dis night bad luck has kotch me befo an' behime—mostly behime."

Skeeter sat down to rest his mind and collect his impressions. He was not the jaunty, confident, debonair young man he had been a few hours before. He felt like something had gone out of him, fading like breath upon a razor, leaving him but a shell of his former self, never to recover what he had lost and be the same again.

Tears of weakness and nervous collapse came into his eyes and rolled down his cheeks to the corners of his mouth. He wiped them away with the palm of his yellow hand and spoke again:

“One time when I wus little I axed Marse John Flournoy whar I come from. He tole me dat a buzzard laid me an’ de debbil hatched me in de hot ashes. I don’t misdoubt dem words, because I been ketchin’ hell ever since!”

Idle Dreams

"I ain't no scholard an' I don't need no book," Skeeter Butts proclaimed as he sat under the shade of a chinaberry tree in the rear of the Hen-Scratch saloon.

"Mebbe so," the glib-talking man beside him said; "but dis here ain't no highbrow book. It tells all 'bout whut dreams means. Don't you never dream nothin'?"

"Shore!" Skeeter exclaimed, clawing at a high, white collar which threatened to saw his head off. "Las' night I dreamt dat I done died an' went to de bad place."

"Dar now!" his friend exclaimed, turning the pages of the book until he found the word "Hell." "You listen to dis." Then, with the utmost difficulty the darky read: "'To dream of seein' hell denotes dat de dreamer's life is a bad one, an' is an in-ti-ma-tion to him of re-for-ma-tion.'"

"My gosh!" Skeeter Butts exclaimed, his eyes nearly popping out of his head. "Dat shore hit me right in de center of myse'f. How do dat book know?"

"I dunno," the negro answered. "I s'pose it's inspired. Anyways, it don't never miss nothin'. Is you had any mo' dreams recent?"

"Suttinly," Skeeter said, with a frightened expression on his saddle-colored face. "Night befo' las' I dreamed dat I wus up in a balloom."

"Us'll see whut dat means," his friend exclaimed, fumbling with the book. "Here it am: 'Balloom—To dream of it shows dat you will engage in many chi-mer-i-cal plans.'"

"Engage in—*which?*" Skeeter demanded in a startled tone.

"Chi-mer-i-cal," the negro repeated with difficulty. "Dat's de kind it specify—Gawd knows whut dat means."

"How many of dem dreams comes true?" Skeeter asked uneasily, gazing at the gaudy red cover of the book.

"All of 'em," his companion answered promptly. "A garntee goes wid de book. Try it on wid anodder dream."

Skeeter hesitated a moment, thinking heavily. Then he said:

"'Bout a week ago I dreamed 'bout rats."

"Huh!" the other darky grunted as he found the place in the book. "Here am de word: 'Rats—Se-cret en-e-mies.'"

"Looky here, nigger!" Skeeter Butts exclaimed in a frightened voice as he sprang to his feet, "dat shore is a dangersome book. Put all dem dreams togedder an' look whut sort of a prize-package I done drawed!"

"Dat package shore is got some lemons in it fer you, Skeeter," his friend assured him. "De fust dream says dat yo' life am bad an' you oughter git reformed; de second dream specify dat you is gwine engage in—in—whut-you-call-it plans; de las' dream orate dat you got plenty enemies!"

"Dat's de way it goes," Skeeter mourned.

"Does you want a garntee dat all 'em dreams will come true?"

"Naw!" Skeeter howled. "I wants a garntee dat none of 'em gits to come to pass."

He snatched a package of cigarettes out of his pocket, lighted one with trembling fingers, burned it to his lips with furious puffs, and spat the stub out upon the ground. Then he exhaled an immense volume of smoke around his head, as if invoking protective incense from the depths of his lungs.

"How much do dat book cost?" Skeeter finally asked.

"One dollar," was the answer.

"Make it fo' bits an' I'll buy de book," Skeeter told him.

"I cain't do it, Skeeter," the other darky responded. "I needs a dollar. Excusin' dat, a nigger whut ain't willin' to pay one roun' dollar to learn how much bad luck is gwine git him deserves to hab a few mo' bad dreams."

"Dat's a fack," Skeeter sighed as he laid a silver dollar on his companion's knee and reached out his hand for the volume.

"I hates to part wid dis book, Skeeter," his friend said, as he reluctantly handed it over. "It shore is a wonder book. I been readin' atter it fer mighty nigh a year. One dream I had specify dat somebody wus gwine inherit me money!"

"I might could stan' dat kind of a dream," Skeeter said in a solemn tone of voice. "But I's gwine roost powerful low fer a little while till I kin change dem bad dreams I'm had to good ones."

"Dat's de rule," the other darky chuckled, as he pocketed the dollar and rose to leave. "Ef dat book says, 'Lay low,' you done got yo' ordahs. Ef it tells a rabbit to climb a tree, Br'e'r Rabbit had better hunt a easy one to git up on an' straddle a limb."

"Don't tell nobody dat I done bought dis book, pardner," Skeeter begged. "I wants to gib it a good try-on fust."

"I ain't say nothin'," the darky grinned as he started away. "Dis dollar will gib me a trip to N' Awleens on de steamboat, an' I's gwine to de landin' right now."

When the man had gone Skeeter laid the book aside, and busied himself in cleaning the saloon, wiping off the bar and the tables and sweeping the room. He tried to take his mind off of the book, but the interpretations of his dreams constantly recurred to his mind, and he felt a growing uneasiness.

"I wonder who dem secret enemies is," he sighed. "Dat book oughter had tole me mo' 'bout dat."

He counted off upon his fingers all the negroes whom he did not like; then he counted those whom he knew did not like him; then he exclaimed:

"Dat don't he'p me none. Ef I knows deir names, of co'se dey ain't really secret enemies!"

He sat down at a table, lighted another cigarette, let the hot ash fall from the end and set his trousers afire. Then he dropped his smoke, put out the fire, and viewed the damage with popping eyeballs.

"Dat's a *bad* sign," he exclaimed. "A nigger ain't in luck whut sets his pants on fire!"

He got up and walked toward the rear exit of the saloon, traveling with jerky, nervous steps, and looking behind him twice with a frightened glance. He seated himself again in the shade of the

chinaberry tree, and the book lay upon the chair which his friend had vacated.

Skeeter eyed the volume a long time with increasing uneasiness. The gaudy red-cover design represented a red woman, propped up on some red pillows, asleep, and holding a red fan in her hand. In the background was another red woman waving a wand, and a winged white boy, holding a black hat in one hand and a bag of money in the other. Scattered about on the red woman's red couch were playing cards, envelopes, and one square piece of paper which contained the numbers, "4-11-44."

"I onderstan's dem numbers," Skeeter mumbled to himself. "Whar is 7-11?"

Skeeter lighted another cigarette and puffed it furiously. Twice he reached out his hand to take the book, then drew back without touching it. He looked away several times, but the gaudy cover design attracted him each time with a sort of hypnotic fascination.

"I hadn't oughter bought dis book," he sighed. "A nigger ain't in luck ef he knows too much about his innards."

Finally he overcame his fear to the point where he ventured to turn the cover, and lo! on the other side was the picture of an aged negro, his black face framed in white hair and beard, his spectacles pushed up on his flat forehead, his mouth spread wide in a snaggle-toothed laugh.

"My Gawd!" Skeeter exclaimed, springing to his feet and gazing at the face with a fear which made his lips tremble, and his hands shake, and his knees knock together. "Dar's a tintype of ol' Swampo, dat wild Affican nigger whut used to live in a holler sycamo' tree in de Little Moccasin Swamp!"

He sat down, resting his elbows on his knees and his face in his hands. For five minutes he strove to recall all that he knew and had

heard of Swampo.

He remembered the leering, leathery, wrinkled face of the old half-wit negro, who came to town on every Saturday afternoon, and smirked and bowed and scraped around the white folks, holding out a clawlike hand, begging for a few pennies. Once he had heard a fearful screaming among the blue jays in the swamp, and had crept through the high undergrowth to see what the trouble was; and lo! Swampo had caught a blue jay, had laid the bird on its back, and had pinioned its wings to the ground with forked sticks.

The bird's horrible screams had brought all the jays in that part of the swamp to the spot, and they stood around the imprisoned bird, making loud and profane comments upon his unfortunate predicament. At intervals some blue jay, impelled by curiosity, walked up within reach of the captive bird's claws. Instantly the captive reached out, seized the bird, and held him a prisoner until Swampo slunk out of the underbrush, grinning like an ape, and released it!

As he thought about this fearful scene, Skeeter's hair stood up on end, just as it had years before when he witnessed it, and had crawled, terrified, away from that vicinity. A cold shiver passed over his sweat-drenched body; he raised his head and eyed Swampo's wide, laughing mouth with superstitious awe.

"Swampo shore is got de laugh on me," he muttered through chattering teeth. "I wish dat nigger hadn't sold me dis book. I ain't no scholard!"

Lighting one cigarette after another to bolster up his courage, he managed at last to put out a trembling finger and turn the book over so he could read the title-page. With the greatest difficulty he spelled it out, giving the peculiar negro pronunciation to the words as he uttered them:

“Af-ric-an Dream Book an’ Fortune Teller, containin’ de true in-ter-pre-ta-tion of dreams, an’ de numbers of de events to which dey apply. Also prog-nos-ti-ca-tions an’ di-vi-na-tions by cards, dice, do-mi-noes, dreams, moles, an’ marks, phy-si-og-no-my, phy-si-ol-o-gy, signs, au-gu-ri-es, charms, an’ in-can-ta-tions——”

“My good gosh!” Skeeter almost screamed as he sprang to his feet. “Dis is a awful book! Half dem words don’t signify nothin’!”

For ten minutes he walked up and down under the trees muttering to himself, his face fear-stricken, his hands trembling, his body oozing with cold sweat.

Then with a mighty resolution he reached out for the book, folded it, and slipped it into his hip pocket.

“Dis book is done skeart me plum’ to death,” he sighed. “Ef I die, I’ll go to hell! I wonder whar Revun Vinegar Atts is at? I’s gwine to talk dis over wid some religium pusson!”

The Rev. Vinegar Atts occupied four chairs under a tree in front of the Shoofly church—his body on one, his feet on another, his arms spread wide across the back of two more.

“Howdy, Skeeter?” he exclaimed. “Fotch you out anodder chair from de chu’ch. I needs all I’m got.”

Skeeter looked him over and grinned. For a moment he forgot his fears in contemplation of this squat-legged, pot-bellied, moon-faced negro preacher, whose head was bald except for two tufts of hair, one over each ear, which made him resemble a mule wearing a blind bridle.

"You shore is spreadin' yo'se'f out, Elder," Skeeter said, as he set his chair close beside Vinegar. "You look like a buzzard whut is tryin' to fly back'ards an' upside down at de same time."

"I's like a watermillyum vine," Vinegar boomed. "When I gits sot good, I begins to spraddle."

Skeeter reached to his hip pocket and brought out his dream book.

"Whut you flashin' dat book aroun' fer, Skeeter?" Atts asked suspiciously. "De Bible say dat many study is weary on de flesh."

"I needs some advices from a scholard," Skeeter remarked as he lighted a cigarette. "I done smoked up a whole pack of dese here things in de las' half-hour. I's powerful worried in my mind."

"You done come to de right place fer advices, son," Atts announced with confidence. "Ef you got anything to ax me, jes' bawl out!"

"Does you b'lieves in dreams, Elder?" Skeeter began.

"Well, suh, dat depen's," Rev. Vinegar Atts announced after a moment of cogitation. "As a preacher, of co'se, I b'lieves in Proverdunce; but ef you 'terrogates me jes' as a common cullud nigger pusson—of co'se dat's plum' diffunt."

"Is you had any dreams recent?" Skeeter inquired.

"Yes, suh; I dreamt about a wash-tub las' night," Vinegar informed him.

"Dis book tells whut dat dream signify," Skeeter explained, as he opened the volume and turned to the proper page. "I reads dis about tubs: 'Ef it be filled wid water, you hab evil to fear; an empty tub signify trouble; an' to run against one, sorrow.'"

"Lawdymussy!" Vinegar bawled.

With a convulsive movement of his body, he kicked the chair from under his feet, hurled the chairs from under his arms, and upset himself falling over on his back with his feet in the air like an overturned bug.

He jumped up, breathing like a foundered horse.

"Fear, trouble, an' sorrer!" he bellowed. "I knowed it! I knowed it wus comin' on all de time!"

He sat down, folded his hands, and gazed around him, his mouth hanging open like the jaws of a bull alligator.

"Here I is, Luck!" he mourned. "Jes' come right along, throw me down, an' set on my head, den gimme a dose of bumpo-calomel an' lemme die! O Lawdy, dat dose of dreams is shore heavy on dis nigger's stomick!"

"Dat's pretty servigerous, Vinegar," Skeeter said mournfully, "but you oughter hear whut dis book prophesy 'bout me!"

"Go 'way, little yellor nigger!" Vinegar exclaimed with a flapping motion of his hand toward Skeeter. "Don't tell me nothin' 'bout yo'se'f! Ain't I got all I kin stan' right now? Look at me—I's skeart already; I's got plenty trouble right dis minute; an' as fer sorrer—I's shore sorry you ever fetch yo' ole yellor mug up on dis hill whar I sets!"

"Whut you gwine do, Elder?" Skeeter inquired in a voice which quavered with fear.

"I's gwine hide out till dese here calamities is done passed over," Vinegar bellowed.

He jerked out a soiled white handkerchief and mopped it around his face, backward across the top of his bald head, and over the back of his bull-like neck.

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